

obtained from outpatient drug prescriptions, hospital discharges and ambulatory care records collected from January 1, 2005 to December 31, 2008. The study was designed as a retrospective study cohort. Patients 60 years of age or older were included if at least one prescription for any antiosteoporotic drugs had been filled in between January 1, 2006 and December 31, 2006. For each patient, the following characteristics were considered: gender, age, dosing regimen, previous treatments, previous fractures, co-prescription of calcium/Vitamin D, spot therapy, switcher, comorbidity. The primary outcome of this study was persistence at one year; the secondary outcome was hospitalized osteoporotic fractures based on ICD-9 codes related osteoporotic fracture. **RESULTS:** The final cohort consisted of a total of 7,862 patients, aged >60 years. Kaplan–Meier analysis showed that 3,733 patients (47.5%) were persistent with antiosteoporotic drugs after 1 year. In the logistic regression analysis adjusted for potential confounders odds of fracture were significantly lower for persistent patients (OR:0.79). Older patients were more likely to incur a fracture than younger [70–79 years(OR:1.52), ≥ 80 years (OR:2.49)]. The odds of fracture were significantly higher for patients with previous fractures in comparison with those without previous fractures (OR: 1.70). **CONCLUSIONS:** The current analysis demonstrates a significant association between risk of fracture and persistence. Persistence to therapy with antiosteoporotic drugs is important for the effectiveness of osteoporosis treatment. Improving osteoporosis treatment compliance and persistence is an important challenge for clinicians and the society as a whole.

#### PMS118

##### ACCESS TO BIOLOGICS FOR RHEUMATOID ARTHRITIS IN THE PUBLIC SECTOR OF A LATAM COUNTRY

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**OBJECTIVES:** Argentinean health system is divided in 3 subsectors: Social Security (48%), Public (42%) & Private (10%). It is known that the public one is the one with the biggest gaps in terms of capabilities, infrastructure and budget capacity and the most fragmented (24 different states without standardized procedures). However, no local data is available regarding the accessibility to biologics for the treatment of Rheumatoid Arthritis. The aim of the study is to describe the actual picture of biologics availability in the public sector, rheumatologist perception about main barriers and finally, to describe potential solutions. **METHODS:** A survey to 200 rheumatologist (Rheumatologist population in the whole country is within 400–600) was sent using gForms with the aim to describe the availability of synthetics DMARD, biologics DMARD and targeted synthetic DMARD (Tofacitinib); main barriers according rheumatologist perception and budget management was also assessed. **RESULTS:** 80% of the rheumatologist expressed that biologics are not available in the public sector as a regular treatment, just as an “exception”. Among these spontaneously availability Adalimumab, Rituximab, Etanercept and Tocilizumab were the most named. Surprisingly, synthetic (classic) DMARD like metotrexate is available with severe impairments in the delivery. Main barrier to obtain biologics according rheumatologist perception is the restrictive budget allocation in the Institution, followed by biologic prices. **CONCLUSIONS:** The present study is the first one regarding biologic availability in the public sector in Argentina. Big gap is seen when talking about RA treatments, moreover when a biologic is prescribed. Potential solutions might be: differential prices for different sectors, centralized drug purchasing, well design copayments, and others to be described in the poster. Full references, questionnaire with other responses and potential solutions are to be described in the poster.

#### PMS119

##### ACCESS TO BIOLOGICAL THERAPIES AND CONSUMPTION TRENDS IN BOSNIA AND HERZEGOVINA

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**OBJECTIVES:** Biologics are used for treatment of different diseases from cancer to autoimmune diseases. According to IMS biologics share in total pharma market in 2002 was 11% and will reach 19–20% of market share in 2017. This class of drug bears high costs and this is the main reason of low access to these therapies in developing and low income countries. Due to the costs access to this therapeutics depends on public funding. We examined access and trends of consumption of novel biologics in Bosnia and Herzegovina. **METHODS:** Data on consumption of biologics was generated from official report on annual pharmaceutical expenditure published by State agency for medicines and medical devices. We covered 6-years period (2009–2014). Access to biologics depends on public funding and has direct impact on expenditure and these data have been taken from official reimbursement lists of Health Insurance Funds financing expensive medicines. Data on expenditure are represented in value (EUR) and analysis did not consider volume sales. **RESULTS:** Market share of biologics in total B&H pharma-market in 2009 was 4% and increased to 8% in 2014 which is highly below global trend. Monoclonal antibodies for cancer are present at reimbursement lists from 2009 showing constant sales growth. Trastuzumab is most used biologic (1,9m€ in 2009 and 6,9m€ in 2014), followed by rituximab, sunitinib, sorafenib and bevacizumab. Impact of reimbursement is best shown in case of sunitinib and sorafenib with high sales increase reflecting medical need for these therapies. Imatinib sales significantly dropped after biosimilar introduction into the market in 2013. Lapatinib and nilotinib had been introduced into the market in 2010 and palivizumab and adalimumab in 2011 showing constant sales growth. **CONCLUSIONS:** Access to novel biologic depends on public funding and there is significant need to these therapies. Biosimilar introduction into market can significantly improve access to these therapies and decrease costs

#### PMS120

##### AN ASSESSMENT OF THE IMPACT OF BIOSIMILARS ON ACCESS TO BIOLOGICS BASED ON PRIMARY RESEARCH, SYSTEM DYNAMICS MODELLING, AND WAR GAMING

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**OBJECTIVES:** To establish the key drivers of purchasing, pricing, access, and profitability for biologics in markets where biosimilars, bio-originals, and new innovative biologics compete. To provide insight into how sustainability, profit, pricing and access are driven by differentiation. **METHODS:** A meta-analysis was conducted across all studies (n=14) undertaken by GfK since January 2014 involving the pricing and market access of biologics in Europe in inflammatory disease and oncology. The studies involved primary research, system dynamics modelling, and war gaming (competitive simulation). Primary research comprised interviews (n=250) across 7 European markets: France, Germany, Hungary, Italy, Poland, Spain and the UK, collecting insight at pan-European, National and Regional levels, Physicians, Payers, Patients, and Industry. System dynamics modelling, based on delphi panels of expert opinion, focused on 2 oncology products (trastuzumab, bevacizumab) and 3 anti-TNFs (infliximab, etanercept, adalimumab). War gaming was used to explore the forces of supplier and buyer power, impact of new entrants, impact of substitutes, and competitive rivalry. The impact of price referencing was included in the analysis, as was consideration of parallel trade. **RESULTS:** The analysis showed that the key drivers of purchasing, access, and profitability in markets where biosimilars compete are product differentiation, relative effective net pricing, and multi-criteria decision-making. Both sustainability and profitability are driven by differentiation. War gaming indicates that a market that recognizes these drivers and dynamics will deliver benefits to all stakeholders, including the opportunity for cost savings that can be used to fund access to the next generation of innovative new high cost / high value therapies. **CONCLUSIONS:** Acceptance of multi-criteria decision making that includes non-price criteria, a willingness to pay for differentiation, and the evolution of policies relating to interchangeability, substitution and switching will increase the stability, sustainability and profitability of markets that include biosimilars.

#### PMS121

##### ADHERENCE AND PERSISTENCE TO ALLOPURINOL AMONG HYPERTENSIVE PATIENTS WITH GOUT

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**OBJECTIVES:** Medication persistence and adherence are important to treatment success, particularly where target level achievement is critical, as in gout. Identifying barriers provides opportunity to improve patient outcomes. The objective is to evaluate persistence and adherence of allopurinol (ALLO) new users as well as relation to clinical determinants. **METHODS:** We assessed profile of ALLO use among a cohort of new ALLO users after starting an antihypertensive agents, using RAMQ and MED-ECHO Québec administrative databases. New ALLO users aged 45–85 yrs with ≥1 claim from Jan 1997–Jun 2007 were included. New users were defined as having no ALLO prescribed in the 1 yr prior to cohort entry. Cohort entry was defined by date of 1st ALLO claim. Adherence level was assessed by medication possession ratio (MPR) and cumulative persistence rates by Kaplan–Meier analysis. Adjusted Cox regression models estimated rate ratio of ceasing ALLO. Logistic regression models established relation between non-adherence level and their determinants. **RESULTS:** Of 2752 patients, mean age was 70 (63–76) yrs, 82% men. Close to 50% had ≥1 cardiovascular disease, dyslipidemia (33%), diabetes (21%), CKD (15%), and rheumatic disease (6.3%). Patients included users of low-dose aspirin (33%) and NSAIDs (42%). During the 1st yr, MPR was 71% and high adherence (MPR ≥80%) was 57%. Persistence decreased to 47% after 1-yr follow-up. Non-persistence was more likely in patients with rheumatic disease (by 25%) and in NSAID users (by 18%). For previous ALLO users, persistence was increased by 29%. Persistence was higher for intra-articular corticosteroid users (by 18%), patients who had had a prior use of ALLO (29%), users ≥7 medications (by 39%). Non-adherence determinants were similar to those of non-persistence. **CONCLUSIONS:** Barriers to persistence/adherence occur early during ALLO therapy. Adherence is key to determine success of many treatment approaches; greater attention may result in improved outcomes.

#### PMS122

##### AGE-RATIONING - REALITY OR VIRTUE? A STUDY IN AUTOIMMUNE DISEASE

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**OBJECTIVES:** Biologics are drugs with a large economic burden for health care providers and should only be given to patients with a severe autoimmune disease like rheumatoid arthritis (RA), ankylosing spondylitis (AS) or psoriatic arthritis (PS). The aim of this study was to evaluate the prescription reality of biologics within these diagnoses. **METHODS:** To examine the prescription reality of biologics, prescriptions of a large German claims data base were evaluated. Demographic, prescription and diagnosis data was taken from 2007 to 2013 to identify the prescription routine on a yearly basis. This study included 42,441 to 92,059 patients per year suffering from RA, PS or AS and their observed prescriptions of biologics. Patients were only included if they were fully observable in the specific year of analysis. **RESULTS:** The underlying base population of the whole claims data base (n = 3,6m) is fairly comparable to the overall German population regarding age, gender, morbidity and mortality. In 2013 84,645 AS patients, 37,839 PS and 56,570 RA patients could be observed, where 58,45% are female (mean age = 57,55 years). Overall, the prescription ratio of biologics increased from 1,61% in 2007 to 3,43% in 2013. Concerning gender, no difference in the probability of biologics prescriptions could be observed (57,43 % of biologics patients were female). However, a sharp drop in the prescription of biologics for elderly patients is present (5,8% 30–39y; 5,5% 40–59y vs 3,1% 60–69; 1,74% 70–79; <0,65% 80+). In contrast to this result, patients with a disease combination receive biologics more frequently (MS+AS+PS: 29,89% vs. AS: 5,96%, PS: 2,04%, RA: 9,79%). **CONCLUSIONS:** Although the fraction of patients with biologics increased in the last years, old people seem to be